



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Applicant:

Hanan HERZBERG

Serial No.: 10/511,859

Filed: October 18, 2004

For: Non-Intrusive Modem Performance  
Analysis

Examiner: Leon FLORES

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Confirmation No.: 5049

Group Art Unit: 2611

Attorney  
Docket: 37476

Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Sir:

In the Final Office Action dated April 14, 2009, claims 4-9, 11-13, 15, 16, 18, 20-27, 29, 33, 34, 37-44, 46-51 and 53-55 were finally rejected.

The Examiner rejected claim 16 under 35 U.S.C. §103(a) as being unpatentable over Van Den Brink et al. (hereinafter *Van Den Brink*) (US Patent Application Publication No. 2003/10174765 A1) in view of Downey (US Patent No. 6,690,720 B1), and further in view of Schneider et al (hereinafter *Schneider*) (US Patent Application Publication No. 2004/10095167 A1) and Nakamoto et al. (hereinafter *Nakamoto*) (US Patent No. 7,100,091 B2) for the same reasons as set forth in the last Office Action.

The Examiner rejected claims 4-9, 12, 15, 18, 27, 39, 41-44, 46-51, 53-55 under 35 U.S.C. §103(a) as being unpatentable over Van Den Brink et al. (hereinafter *Van Den Brink*) (US Patent Application Publication No. 2003/10174765 A1) in view of Downey (US Patent No. 6,690,720 B1), and further in view of Javitt et al. (hereinafter *Javitt*) (US Patent No. 6,002,677) and Nakamoto et al. (hereinafter *Nakamoto*) (US Patent No. 7,100,091 B2) for the same reasons as set forth in the last Office Action.

Claims 16, 18, and 53 are the only independent claims in the Application.

It is submitted that the Examiner has not provided a *prima facie* case in support of the rejections of the claims since the above-mentioned references fail to teach at least two features of the independent claims:

**1. None of the references teach “injecting through the line interface noise which forces a retrain of the modem connection” as recited in claims 16, 18, and 53.**

In the Final Office Action dated April 14, 2009, as well as in a previous Office Action dated July 21, 2008, the Examiner states that “However, Downey does. (See fig. 3 & col. 5, lines 1-23) Downey discloses a system for training/re-training the connection of two modems”.

In the response filed on January 21, 2009 Applicants disagreed with the Examiner and argued that that Downey’s system controls the modems, therefore (see fig 1 of Downey) either control processor 26 issues a command to the modem 14 to retrain, or issues a command to DSLAM 10 to bring the modem 14 offline then online, thereby forcing the modem 14 to retrain. This is different and does not suggest the present invention, which injects noise to cause a retrain. In order to do that Downey would have to teach *injecting noise* to cause a retrain, which Downey does not teach nor suggest. (emphasis added by Applicants in the present Pre-Appeal Brief).

In the Final Office Action dated April 14, 2009, the Examiner states that: “The reference of Downey does suggest injecting noise to cause a retrain. (See fig. 3: 310, 315, 320 & col. 5, lines 1-22) The retraining process is caused by determining if more noise impairments are to be tested. (See the flow chart in figure 3)”

Applicants now further point out specifically with reference to the sections which the Examiner points out in Downey. Downey teaches testing a modem with noise impairments, then, when a need arises to cause the modem to retrain (=restart), Downey teaches commanding the modem to restart. These sections of Downey are specifically where Downey could have taught injecting through the line interface *noise which forces a retrain* of the modem connection, if Downey was teaching such a concept. However, Downey did not.

Thus, the prior art fails to teach “injecting through the line interface noise which forces a retrain of the modem connection” as required by independent claims 16, 18 and 53.

2. None of the references teach “injecting the noise comprises connecting a low impedance circuit, for at least some of the frequency bands carrying signals, to the communication link”, as recited in claim 16.

In the Final Office Action dated April 14, 2009, as well as in a previous Office Action dated July 21, 2008, the Examiner states that “The reference of Schneider does suggest that the noise waveform generators may be low impedance outputs. (See ¶s 74-75).

In the Office Action dated July 21, 2008 the Examiner states: “However, Schneider does. (See ¶s 74-75) Schneider discloses that wherein injecting the noise comprises connecting a low impedance circuit, for at least some of the frequency bands carrying signals, to the communication link.”

Applicants again point out, specifically with reference to the sections which the Examiner points out in Schneider, and citing from Schneider:

“[0075] In order not to disturb signals generated by the xDSL modem office ends 1210a, 1210b, the Thvenin impedance of the noise waveform generators 1220a, 1220b *should be high* in comparison to the impedance of the telephone loop simulator 1215 and xDSL modem office ends 1210a, 1210b. *If not, the low-impedance output of the noise waveform generators 1220a, 1220b may overdrive the communications channel*, thereby disturbing the signals generated by the xDSL modem office ends 1210a, 1210b. Thus, *the analog outputs* of the noise waveform generators 1220a, 1220b, which may be low-impedance outputs, *should be converted into high-impedance balanced current source outputs*.”

Applicants have highlighted where Schneider *teaches away* from “connecting a low impedance circuit, for at least some of the frequency bands carrying signals, to the communication link”.

Thus, the prior art fails to teach “injecting through the line interface noise which forces a retrain of the modem connection” as required by independent claim 16.

Applicants believe that the Final Rejection dated April 14, 2009 is not proper and without basis, specifically that the rejections arise from the Examiner not appreciating the essence of the cited art and ignoring the arguments brought up by the Applicants. Applicants believe that independent claims 16, 18, and 53 are neither anticipated by nor rendered obvious over the cited art.

Since independent claims 16, 18, and 53 are patentable over the cited art, claims 16, 18, and 53, and claims 4-9, 11-13, 15, 20-27, 29, 33, 34, 37-44, 46-51 and 54-55 which are respectively dependent therefrom, are in condition for allowance.

Applicants respectfully request that the Panel issue a Notice of Allowance in this case.

Respectfully Submitted,

A handwritten signature in cursive script, appearing to read "Martin D. Moynihan".

Martin D. Moynihan  
Registration No. 40,338

Date: October 8, 2009